MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018

MCC1013 – COMPUTER MODELLING

(All sections / Groups)

21 OCTOBER 2017
9.00 a.m. - 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages including the cover page.
2. Answer **FOUR** out of SIX questions. 10 marks is given for each question.
3. Please write all your answers in the Answer Booklet provided.

Section 1 (Fill in the blanks)
Please answer all questions. Each question carries 1 mark. (10 marks for this section)

1. The (0, 0, 0) coordinates are known as the _____ of the 3D world.

2. The _____ is the most basic component of 3D creation without length and width, simply positioned in space.

3. The _____ viewports and the _____ viewports in 3D do not distort objects.

4. The spline modeller is _____, meaning that you can zoom in real close to an object and never see any faceting.

5. _____ is the process of creating custom objects and meshes.

6. The _____ scale is used to resize objects in the 3D world.

7. The _____ technique creates an object by revolving a curve along an axis.

8. The polygonal expansion technique adds polygon by _____ and _____ polygonal surfaces.

9. Curtains and draperies are best modelled using the _____ modeller.

10. The _____ indicates which side of the polygon is visible and what direction it is facing.

Continued...

Section 2 (Short answers)
Please answer all questions. Each question carries 3 marks. (15 marks for this section)

1. What are the differences between geometries and shapes in 3ds Max?

2. Name three types of geometries available in 3ds Max.

3. Name three types of shapes available in 3ds Max.

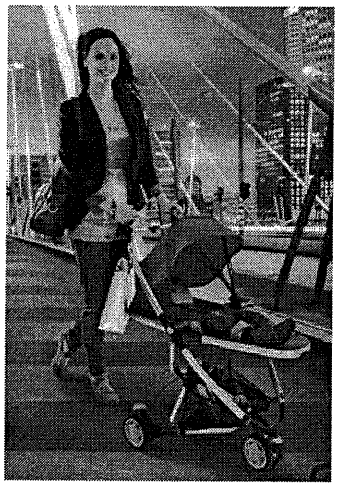
4. Draw and label the 3D sub objects of a tetrahedron.

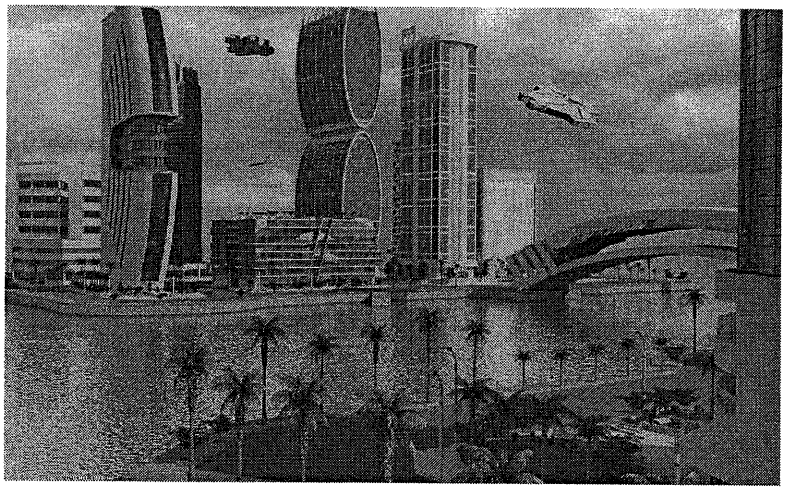
5. Duplicating objects in 3D is creating clones in forms of copies, instances, or references. Explain the differences between the three clones.

Continued...

Section 3 (Essay answers)
Question number 1, 2, 3, and 4 are based on this statement below. Please answer ***THREE*** *questions ONLY. Each question carries 5 marks. (15 marks for this section)*

The Problem
You are an art director in a new '***Quinny Zapp Xtra 2'*** tv commercial. As an art director, you have to work with a team of designers, modellers and animators for this project. Your team has to create a futuristic outer-space environment but the story is happening in a natural human life scene. You have to build an entirely 3D environment and the digital characters (**alien parents**) will be acting and interacting with a natural actor (**the baby in the stroller**). Here are the sample of the stroller and the environment.





1. Please explain how to create and model the background scene in detail.

   (These include buildings, street lights etc)

2. Please explain what is **photorealism** in 3D. There are 10 principles of photorealism. Please name **five** of them.

3. **Clutter and chaos** and **specularity** are two examples in the principles of photorealism. Please explain these two principles clearly.

4. You will use photometric lighting in this scene. Please explain what is photometric lighting and give **two** examples of this type of light.

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